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(54) Toy figure

(57) A toy figure having a torso and a limb 1, wherein, the connection between the torso and the limb comprises a part-spherical recess 3 in the torso, a mating part-spherical surface 2 on the adjacent end of the limb rotatably received in said recess, and anchoring means comprising a ball 5 secured to the torso concentrically with the said recess 3, and a mating socket 7 in the limb, concentric with the said part-spherical surface of 2 the limb, which rotatably receives the said ball.

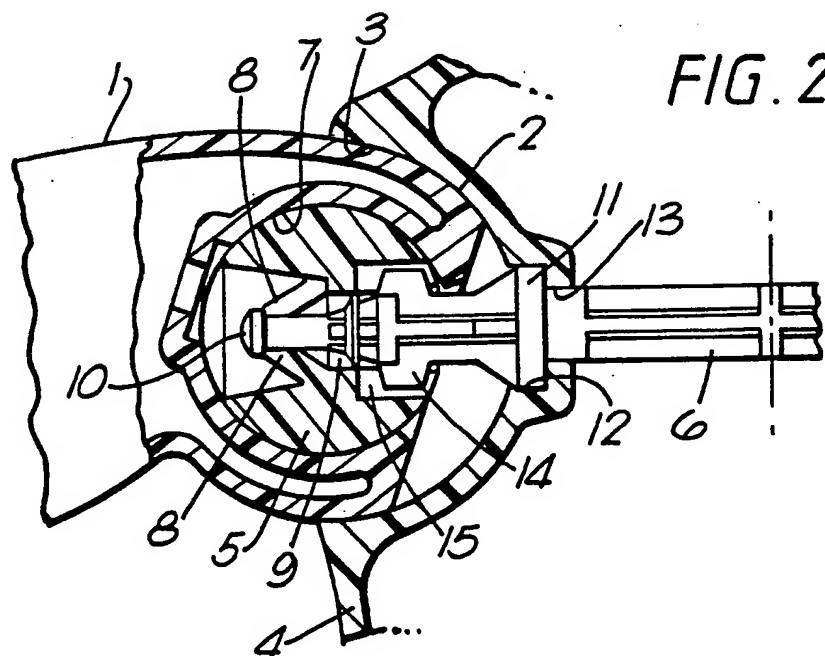
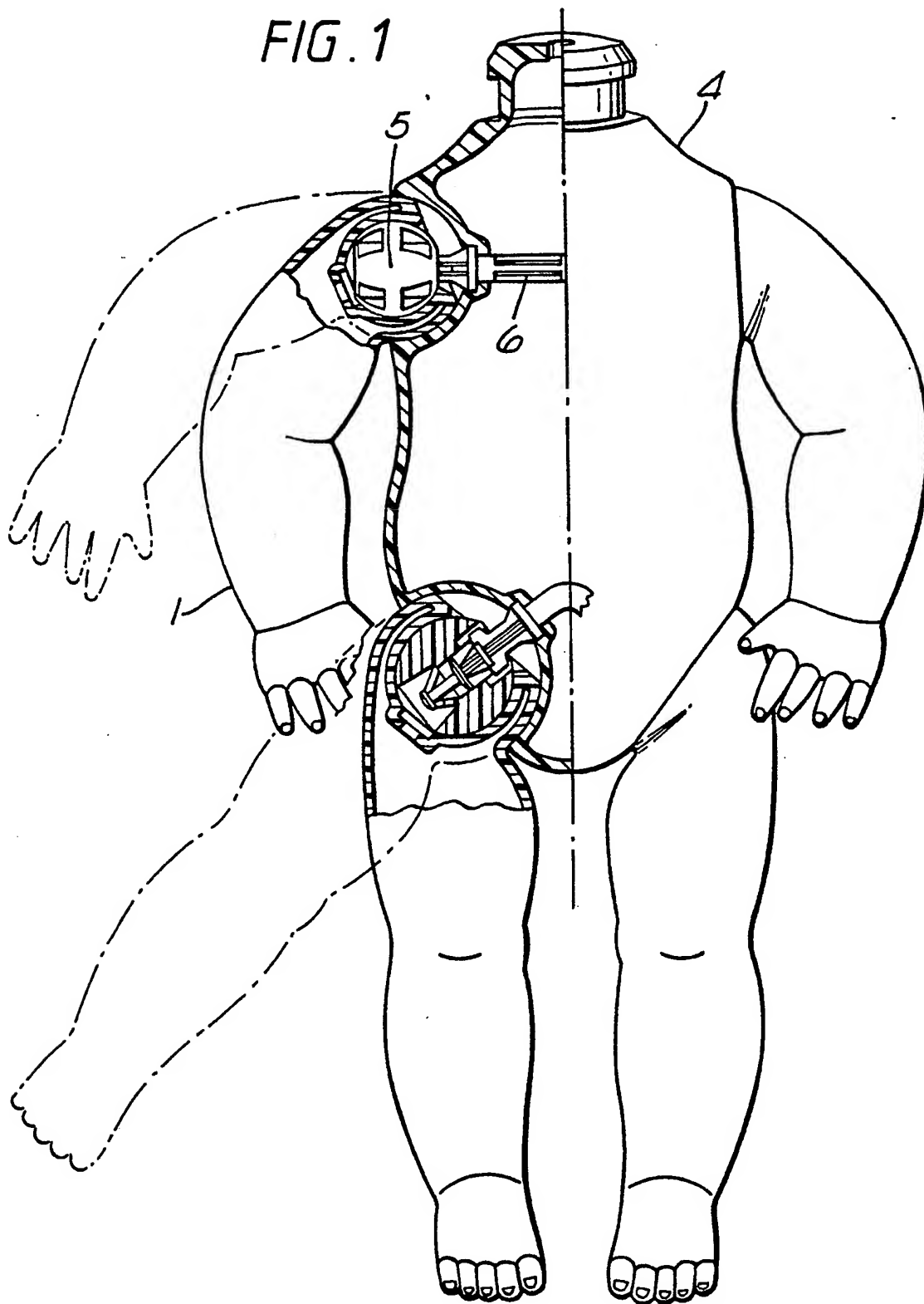


FIG. 2

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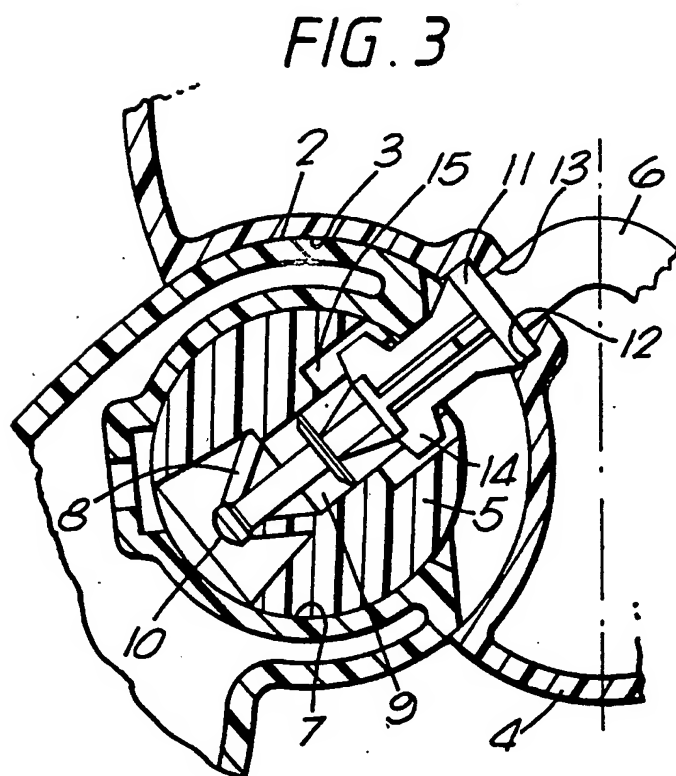
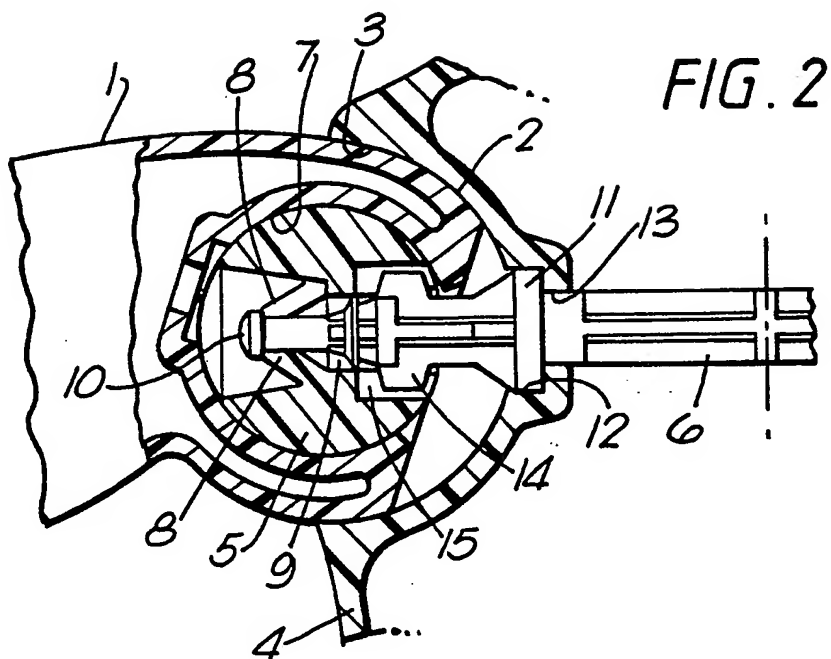
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FIG. 1



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"Toy figure"

This invention relates to toy figures, particularly but not essentially toy human figures such as dolls, and is particularly directed to the provision of improved means for movably anchoring a limb to the torso of such a figure.

It is known to provide a part-spherical recess in the torso of such a figure, and to form the adjacent end of a limb with a mating part-spherical surface which is rotatably received in the said recess, but a problem still remains in providing a satisfactory anchoring means for the limb to enable it to be freely movable but at the same time posable in a realistic manner.

Viewed from one aspect the present invention provides a toy figure having a torso and a limb, wherein the connection between the torso and the limb comprises a part-spherical recess in the torso, a mating part-spherical surface on the adjacent end of the limb rotatably received in said recess, and anchoring means comprising a ball secured to the torso concentrically with the said recess, and a mating socket in the limb, concentric with the said part-spherical surface of the limb, which rotatably receives the said ball.

The limb is thus freely rotatable on its anchoring means, constituted by the said ball, whilst at the same time being confined to rotate in the said recess in the torso. Thus the limb is positively located and anchored relative to the torso, whilst being freely rotatable to any desired posed position in a realistic manner.

Preferably the torso is at least partially hollow and the said ball is secured on one end

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of an elongate anchoring member which extends through the base of the said recess in the torso, into the interior of the torso.

Preferably the ball is secured on the said
5 end of the anchoring member by a non-releasable snap fit, a snap-fitting portion of the anchoring member extending through a central aperture in the ball.

Preferably the said anchoring member is secured
10 against axial rotation relative to the torso. In a preferred embodiment a non-circular part of the anchoring member is fitted in a mating non-circular aperture in the base of the said recess in the torso, to hold the anchoring member against
15 axial rotation.

Conveniently the said anchoring member extends across the interior of the torso and the other end thereof similarly mounts the ball of the anchoring means of another complimentary limb of the figure,
20 e.g. another arm or leg thereof.

An embodiment of the invention will now be described by way of example and with reference to the accompanying drawings, in which:-

Figure 1 is a partially cross-sectioned front
25 elevation view of a toy figure according to the invention, in the form of a doll;

Figure 2 is an enlarged cross-sectional view of the connecting means for an arm of the doll; and

Figure 3 is a similar view of the leg connecting
30 means.

Referring to the drawings, connecting means for the two arms and two legs of a doll are all similarly constructed in accordance with the invention, and only one such connecting means need therefore
35 be described in detail.

Thus the doll's right arm 1, which is of hollow construction, is formed with a part-spherical surface

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2 at the shoulder end, which is received in a mating part-spherical shoulder recess 3 in the hollow torso 4. A ball 5 secured on an elongate anchoring member 6 is received in a mating part-spherical socket 7 in the arm, concentric with the surface

- 5 2. The anchoring member 6 extends across the interior of the torso and mounts the other arm similarly at its other end (not shown).

- The anchoring member is formed to make a snap-fitting, non-releasable, engagement with the
- 10 ball by way of a ring of three flexible flaps 8 formed around an aperture 9 extending through the centre of the ball to receive the end of the anchoring member, the said flaps closing in behind a terminal knob 10 on the anchoring member when the latter
- 15 is pushed fully through the aperture. A square portion 11 on the anchoring member engages in a complimentary square portion 12 of an aperture 13 in the base of the shoulder recess 3 in the torso, to hold the anchoring member against rotation.
- 20 The material of the torso is made of a sufficiently soft and resilient plastics material, such as plasticized p.v.c., to enable the anchoring member to be pushed through the apertures 13 in the respective shoulder recesses. The arms and legs are made of the same
- 25 relatively soft and resilient plastics material as the torso, whilst the anchoring members are preferably made of nylon and the balls of polypropylene.

- The ball 5 is held against rotation relative to the anchoring member (although this is not essential)
- 30 by key portions 14 on the anchoring member engaging in complimentary internal slots 15 extending laterally from the central aperture in the ball.

- It will thus be seen that in this preferred embodiment of the invention all of the limbs of
- 35 the doll are connectible to the torso without the

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use of adhesive, welding or any other ancillary means, but simply by the snap-fitting of the respective balls to their respective anchoring means. The limbs are readily movable to any desired posed
5 positions, in a realistic manner, and will reliably remain in whatever such positions are desired due to the close fit between the relatively rotatable surfaces of the limbs, the torso and the balls.

It is to be clearly understood that there
10 are no particular features of the foregoing specification, or of the claims appended hereto, which are at present regarded as being essential to the performance of the present invention, and that any one or more of such features or combinations thereof may therefore
15 be included in, added to, omitted from or deleted from any of such claims if and when amended during the prosecution of this application or in the filing or prosecution of any divisional application based thereon.

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Claims:-

1. A toy figure having a torso and a limb, wherein the connection between the torso and the limb comprises a part-spherical recess in the torso, a mating part-spherical surface on the adjacent end of the limb rotatably received in said recess, and anchoring
5 means comprising a ball secured to the torso concentrically with the said recess, and a mating socket in the limb, concentric with the said part-spherical surface of the limb, which rotatably receives the said ball.
- 10 2. A toy figure as claimed in claim 1, wherein the torso is at least partially hollow and the said ball is secured on one end of an elongate anchoring member which extends through the base of the said recess in the torso, into the interior
15 of the torso.
3. A toy figure as claimed in claim 2, wherein the ball is secured on the said end of the anchoring member by a non-releasable snap fit, a snap-fitting portion of the anchoring member extending through
20 a central aperture in the ball.
4. A toy figure as claimed in claim 2 or 3, wherein the said anchoring member is secured against axial rotation relative to the torso.
5. A toy figure as claimed in claim 4, wherein
25 a non-circular part of the anchoring member is fitted in a mating non-circular aperture in the base of the said recess in the torso, to hold the anchoring member against axial rotation.

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6. A toy figure as claimed in any of claims
2 to 5, wherein the other end of the said anchoring
member similarly mounts the ball of the anchoring
means of another complimentary limb of the figure,
5 e.g. another arm or leg thereof.

7. A toy figure as claimed in any preceding
claim, which is a human figure having both of its
arms and legs connected to the torso in the manner
aforesaid.

10 8. A toy figure having a torso and a limb, wherein
the connection between the torso and the limb is
substantially as hereinbefore described with reference
to the accompanying drawings.

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